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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/516,621	12/03/2004	Tatsuo Tsuneka	SAE-036	5295
20374	7590	05/30/2007		
KUBOVCIK & KUBOVCIK SUITE 710 900 17TH STREET NW WASHINGTON, DC 20006			EXAMINER CHEUNG, WILLIAM K	
			ART UNIT 1713	PAPER NUMBER
			MAIL DATE 05/30/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/516,621	Applicant(s) TSUNEKA ET AL.	
	Examiner William K. Cheung	Art Unit 1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>032207</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. In view of the pre-appeal conference decision of May 17, 2007, the instant application is re-opened for prosecution. Claims 6-11 are pending.
2. In view of the argument filed April 6, 2007, the rejection of Claims 6-11 under 35 U.S.C. 103(a) as obvious over Ashihara et al. (US Patent 6,277,912) in view of Verardi et al. (US Patent 5,863,646), is withdrawn.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Art Unit: 1713

4. Claims 6-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto et al. (US 6,150,076).

The invention of claims 6-11 relates to a process for producing an aqueous resin dispersion composition without the use of an emulsifier comprising the steps of, in order: dissolving an acid-modified chlorinated polyolefin in an ethereal solvent; adding a basic substance to the acid-modified chlorinated polyolefin to neutralize; adding a dispersion medium consisting of water to disperse the neutralized acid-modified chlorinated polyolefin therein; and removing the ethereal solvent.

Yamamoto et al. (col. 7, line 27-36) disclose a process for preparing a photosensitive resin composition comprising the components to be dissolved in any order and mixed in an appropriate solvent such as tetrahydrofuran, dioxane which can swell, disperse. Then the ethereal solvent is removed at the end of the process.

Regarding the claimed "adding a basic substance to the acid-modified chlorinated polyolefin to neutralize", Yamamoto et al. (col. 5, line 12-29) clearly disclose a step of adding an amine to the photosensitive resin composition to obtain a specific pH. Further, Yamamoto et al. (col. 4, line 5-11) disclose that the chlorinated polyethylene has about 10-50 wt% of chlorine.

Because Yamamoto et al. (col. 3, line 64 to col. 4, line 4) clearly disclose the specific commercially available chlorinated polyethylene products inherently possess a specific molecular weight ranges and that the claimed molecular weight range of claim 9 is quite broad, the examiner has a reasonable basis that that claimed molecular weight range is possessed in Yamamoto et al.

The examiner acknowledges that Yamamoto et al. (col. 6, line 20-28) disclose that when water is used, a surfactant such as sodium alkylbenzenesulfonate, sodium alkylnaphthalenesulfonate,...may be contained in the water. However, Yamamoto et al. do not teach that a surfactant must be used. Therefore, the examiner has a reasonable basis that the claimed process fully encompasses processes that do not involve the use of an emulsifier.

Regarding the claimed "acid-modified chlorinated polyolefin", Yamamoto et al. (col. 3, line 65 to col. 4, line 4) disclose generically all chlorinated polyethylene (including the acid-modified chlorinated polyolefin as claimed) is a one of the components of the disclosed photosensitive resin composition.

The difference between the invention of claims 6-11 and Yamamoto et al. is that Yamamoto et al. do not disclose that the chlorinated polyethylene has be acid-modified.

However, the teachings of Yamamoto et al. (col. 3, line 65 to col. 4, line 4) generically include all chlorinated polyethylene, which include the acid-modified chlorinated polyolefin as claimed. Motivated by the expectation of success of developing the process of preparing a photosensitive resin composition (abstract), it would have been obvious to one of ordinary skill in art to recognize that an acid-modified chlorinated

Art Unit: 1713

polyethylene is still within the scope of chlorinated polyethylene teachings of Yamamoto et al. to obtain the invention of claims 6-11.

5. Claims 6-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto et al. (US 6,150,076) in view of Sales (US 5,169,888).

Yamamoto et al. (col. 7, line 27-36) disclose a process for preparing a photosensitive resin composition comprising the components to be dissolved in any order and mixed in an appropriate solvent such as tetrahydrofuran, dioxane which can swell, disperse. Then the ethereal solvent is removed at the end of the process.

Regarding the claimed "adding a basic substance to the acid-modified chlorinated polyolefin to neutralize", Yamamoto et al. (col. 5, line 12-29) clearly disclose a step of adding an amine to the photosensitive resin composition to obtain a specific pH. Further, Yamamoto et al. (col. 4, line 5-11) disclose that the chlorinated polyethylene has about 10-50 wt% of chlorine.

Because Yamamoto et al. (col. 3, line 64 to col. 4, line 4) clearly disclose the specific commercially available chlorinated polyethylene products inherently possess a specific molecular weight ranges and that the claimed molecular weight range of claim 9

Art Unit: 1713

is quite broad, the examiner has a reasonable basis that that claimed molecular weight range is possessed in Yamamoto et al.

The examiner acknowledges that Yamamoto et al. (col. 6, line 20-28) disclose that when water is used, a surfactant such as sodium alkylbenzenesulfonate, sodium alkylnaphthalenesulfonate,... may be contained in the water. However, Yamamoto et al. do not teach that a surfactant must be used. Therefore, the examiner has a reasonable basis that the claimed process fully encompasses processes that do not involve the use of an emulsifier.

Regarding the claimed "acid-modified chlorinated polyolefin", Yamamoto et al. (col. 3, line 65 to col. 4, line 4) disclose generically all chlorinated polyethylene (including the acid-modified chlorinated polyolefin as claimed) is a one of the components of the disclosed photosensitive resin composition.

The difference between the invention of claims 6-11 and Yamamoto et al. is that Yamamoto et al. do not disclose that the chlorinated polyethylene has be acid-modified.

Sales (col. 2, line 56-68) discloses the advantages of using a chlorinated polyethylene that has been acid-modified, which would make the chlorinated polyethylene suitable as vehicle for printing inks or adhesives. Therefore, motivated by the expectation of success of developing a resin composition that is suitable for the

Art Unit: 1713

printing ink or adhesive industries, it would have been obvious to one of ordinary skill in art to replace the chlorinated polyethylene of Yamamoto et al. with the acid-modified polyethylene of Sales to obtain the invention of claim 6-11.

Regarding the claimed "0.1 to 10 wt%" of claim 7, Sales (col. 2, line 56-68) clearly discloses using a chlorinated polyethylene that has been acid-modified at an undisclosed level of acid functionalities. However, applicants must recognize that "acid-modified" implies that the level of acid functional group incorporation should be less than 50wt%, which inherently possess the "0.1 to 10 wt%" of claim 7.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William K. Cheung whose telephone number is (571) 272-1097. The examiner can normally be reached on Monday-Friday 9:00AM to 2:00PM; 4:00PM to 8:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David WU can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1713

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



William K. Cheung, Ph. D.

Primary Examiner

May 26, 2007

**WILLIAM K. CHEUNG
PRIMARY EXAMINER**